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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/829,834	04/10/2001	Joseph R. Edwards	ROC920010078US1	1266

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EXAMINER	
ROCHE, TRENTON J	

ART UNIT	PAPER NUMBER
2193	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/829,834	EDWARDS ET AL.	
	Examiner	Art Unit	
	Trenton J. Roche	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 August 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 April 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is responsive to communications filed 10 August 2005.

2. Per applicant's request, amended claims 1, 10 and 14 has been entered. Claims 1-14 are pending.

3. Claims 1-14 have been examined.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 10-14 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,870,749 to Adusumilli.

Regarding claim 1:

Adusumilli teaches:

- a computer-implemented method for parsing and generating data structures for use by data processing applications in a computer system ("automatic generation of data structures for use in communicating with devices..." in lines 18-20 of the Abstract)
- utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure ("The CStructureSize field contains the size of the C structure...(the sizeof() operator may be used to compute this size... The fieldOffset field is set to the offset of the

corresponding field in the C structure ...(the offsetof() macro may be used to compute the offset of the field)" in col. 11 lines 30-50)

- storing said defined length and said defined location of each said parameter of the data structure within an identifier object in a data structure definition ("The CStructureSize field contains the size of the C structure...(the sizeof() operator may be used to compute this size... The fieldOffset field is set to the offset of the corresponding field in the C structure ...(the offsetof() macro may be used to compute the offset of the field)" in col. 11 lines 30-50. The CstructureSize and fieldOffset fields are the parameters of the data structure.)
- used for parsing and generating data structures ("creates...C data structures according to input configuration information" in col. 5 lines 56-57)

substantially as claimed.

Regarding claim 10:

Adusumilli teaches:

- a compiler and platform independent framework for parsing and generating data structures used by data processing applications in a computer system ("The ASN.1 compiler and GDMO compiler parse the ASN.1 and GDMO definitions and generate meta data that represent the information provided in original source files in a format that is convenient for use by other applications..." in col. 6 lines 5-9)
- means for defining a length and a location of each parameter of a data structure utilizing sizeof and offsetof functions ("The CStructureSize field contains the size of the C structure...(the sizeof() operator may be used to compute this size... The fieldOffset field is set to the offset of the corresponding field in the C structure ...(the offsetof() macro may be

used to compute the offset of the field)" in col. 11 lines 30-50. The CstructureSize and fieldOffset fields are the parameters of the data structure.)

- means for storing said defined length and said defined location of each said parameter of the data structure within an identifier object in a data structure definition ("The CStructureSize field contains the size of the C structure...(the sizeof() operator may be used to compute this size... The fieldOffset field is set to the offset of the corresponding field in the C structure ...(the offsetof() macro may be used to compute the offset of the field)" in col. 11 lines 30-50. The CstructureSize and fieldOffset fields are the parameters of the data structure.)
- used for parsing and generating data structures ("creates...C data structures according to input configuration information" in col. 5 lines 56-57)

substantially as claimed.

Regarding claim 11:

The rejection of claim 10 is incorporated, and further, Adusumilli discloses procedural table-driven or object rules-driven methods as claimed (Note at least Figures 3-7 and the corresponding sections of the disclosure.)

Regarding claim 12:

The rejection of claim 10 is incorporated, and further, Adusumilli discloses protocol data units (PDUs) as claimed ("a method for translating CMIP PDUs to/from custom designed data structures..." in col. 2 lines 46-47)

Regarding claim 13:

The rejection of claim 10 is incorporated, and further, Adusumilli discloses control code for writing and reading headers for data storage as claimed ("a method for translating CMIP PDUs to/from custom designed data structures..." in col. 2 lines 46-47. A header is inherently present in the PDU.)

Regarding claim 14:

Adusumilli teaches:

- a computer program product for parsing and generating data structures for use by data processing applications in a computer system ("automatic generation of data structures for use in communicating with devices..." in lines 18-20 of the Abstract)
- said computer system having a processor, a memory controller coupled to said processor by a system bus, a main memory coupled to said memory controller, said computer program product including a plurality of computer executable instructions stored on a computer readable medium ("A computer disk can be used to store the code implementation of the configuration..." in col. 24 lines 46-47. For the system to generate data structures and use sizeof and offsetof functions, a processor, memory controller and main memory coupled to the memory controller must inherently be present in the system for the functions to execute.)
- utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure ("The CStructureSize field contains the size of the C structure...(the sizeof() operator may be used to compute this size... The fieldOffset field is set to the offset of the corresponding field in the C structure ...(the offsetof() macro may be used to compute the

offset of the field)" in col. 11 lines 30-50. The CstructureSize and fieldOffset fields are the parameters of the data structure.)

- storing said defined length and said defined location of each said parameter of the data structure within an identifier object in a data structure definition ("The CStructureSize field contains the size of the C structure...(the sizeof() operator may be used to compute this size... The fieldOffset field is set to the offset of the corresponding field in the C structure ...(the offsetof() macro may be used to compute the offset of the field)" in col. 11 lines 30-50. The CstructureSize and fieldOffset fields are the parameters of the data structure.)
- used for parsing and generating data structures ("creates...C data structures according to input configuration information" in col. 5 lines 56-57)

substantially as claimed.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 2-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,870,749 to Adusumilli in view of U.S. Patent 6,028,863 to Sasagawa et al, hereafter referred to as Sasagawa.

Regarding claim 2:

The rejection of claim 1 is incorporated, and further, Adusumilli does not disclose the data structure being an ATM information element. Sasagawa discloses in an analogous communication system using PDUs a data structure being an ATM information element (Note figure 32 and the corresponding section of the disclosure). As indicated by Sasagawa, ATM information element data structures were well known at the time the invention was made. It would have been obvious to one of ordinary skill in the art at the time the invention was made to perform the steps of utilizing sizeof and offsetof functions to define a length and location, and storing the length and location in a data structure, the data structure being an ATM information element, as this would allow a user to represent attribute data in a space-efficient manner or in a form suitable for efficient database access, as stated in col. 2 lines 16-22 of Adusumilli.

Regarding claim 3:

The rejection of claim 2 is incorporated, and further, Adusumilli does not disclose an ATM information element being a Connection Identifier. Sasagawa discloses in an analogous communication system using PDUs an ATM information element being a Connection Identifier (Note Figure 43 and the corresponding section of the disclosure). As indicated by Sasagawa, Connection Identifiers were well known at the time the invention was made. It would have been obvious to one of ordinary skill in the art at the time the invention was made to perform the steps of utilizing sizeof and offsetof functions to define a length and location, and storing the length and location in a Connection Identifier, as this would allow a user to represent attribute data in a space-efficient manner or in a form suitable for efficient database access, as stated in col. 2 lines 16-22 of Adusumilli.

Regarding claim 4:

The rejection of claim 3 is incorporated, and further, Adusumilli does not disclose a preferred/exclusive parameter. Sasagawa discloses in an analogous communication system using PDUs a preferred/exclusive parameter ("The invariable indication field 'preferred/exclusive' contains the following 3-bit values" in col. 2 lines 65-67). As indicated by Sasagawa, preferred/exclusive parameters were well known at the time the invention was made. It would have been obvious to one of ordinary skill in the art at the time the invention was made to perform the steps of utilizing sizeof and offsetof functions to define a length and location of a preferred/exclusive parameter, as this would allow a user to represent attribute data in a space-efficient manner or in a form suitable for efficient database access, as stated in col. 2 lines 16-22 of Adusumilli.

Regarding claim 5:

The rejection of claim 3 is incorporated, and further, Adusumilli does not disclose a virtual path connection identifier (VPCI) parameter. Sasagawa discloses in an analogous communication system using PDUs a virtual path connection identifier (VPCI) parameter (Note Figure 3 and the corresponding section of the disclosure). As indicated by Sasagawa, virtual path connection identifier (VPCI) parameters were well known at the time the invention was made. It would have been obvious to one of ordinary skill in the art at the time the invention was made to perform the steps of utilizing sizeof and offsetof functions to define a length and location of a virtual path connection identifier (VPCI) parameter, as this would allow a user to represent attribute data in a space-efficient manner or in a form suitable for efficient database access, as stated in col. 2 lines 16-22 of Adusumilli.

Regarding claim 6:

The rejection of claim 3 is incorporated, and further, Adusumilli does not disclose a virtual channel identifier (VCI) parameter. Sasagawa discloses in an analogous communication system using PDUs a virtual channel identifier (VCI) parameter (Note Figure 3 and the corresponding section of the disclosure). As indicated by Sasagawa, virtual channel identifier (VCI) parameters were well known at the time the invention was made. It would have been obvious to one of ordinary skill in the art at the time the invention was made to perform the steps of utilizing sizeof and offsetof functions to define a length and location of a virtual channel identifier (VCI) parameter, as this would allow a user to represent attribute data in a space-efficient manner or in a form suitable for efficient database access, as stated in col. 2 lines 16-22 of Adusumilli.

Regarding claim 7:

The rejection of claim 4 is incorporated, and further, Sasagawa discloses storing a preferred/exclusive parameter in a preferred/exclusive parameter identifier object in a data structure definition ("The invariable indication field 'preferred/exclusive' contains the following 3-bit values" in col. 2 lines 65-67. Further, note Figure 3 and the corresponding section of the disclosure.)

Regarding claim 8:

The rejection of claim 5 is incorporated, and further, Sasagawa discloses storing a virtual path connection identifier (VPCI) parameter in a virtual path connection identifier (VPCI) parameter identifier object in a data structure definition (Note Figure 3 and the corresponding section of the disclosure.)

Regarding claim 9:

The rejection of claim 6 is incorporated, and further, Sasagawa discloses storing a virtual channel identifier (VCI) parameter in a virtual channel identifier (VCI) parameter identifier object in a data structure definition (Note Figure 3 and the corresponding section of the disclosure.)

Response to Arguments

8. Applicant's arguments filed 10 August 2005 have been fully considered but they are not persuasive.

Regarding claims 1, 10 and 14:

The applicant states that Adusumilli does not disclose or suggest utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure, and storing said length and said location of each said parameter of the data structure within an identifier object in a data structure definition. As was admitted by the applicant, sizeof() and offsetof() functions are built in and well known in the art, such as disclosed by Adusumilli. However, the applicant contents that Adusumilli does not disclose using these well-known functions to define a length and location of each parameter of a data structure, and storing said length and said location of each parameter within an identifier object in a data structure definition used for parsing and generating data structures.

As noted in the prior response to arguments, Adusumilli discloses a method for translating attribute data carried in Common Management Information Protocol (CMIP) Protocol Data Units (PDUs)

to/from custom designed data structures, and further, automatic generation of data structures for use in communicating with devices using proprietary data representation. This generation of data structures is based upon a process of generating an initial configuration file from meta data, wherein entries are created in a table data structure known as the Managed Object Class table (MOClassTable). (col. 3 lines 24-28) The structure of the MOClassTable is outlined in Figure 4 and the corresponding sections of the disclosure. Each row or entry of the MOClassTable, which is considered by the Examiner to constitute a parameter of the MOClassTable data structure, has associated with it a size attribute, as well as an offset attribute. Col. 11 lines 18-51 describe that the sizeof() and offsetof() functions can be utilized to define a length and location of each entry in the MOClassTable. These length and location values are then stored in their respective identifier objects within the MOClassTable, specifically, the identifier fields of 'CStructureSize' and 'fieldOffset'. Once this is completed, the method proceeds to parse and generate the user-designed data structures based upon the appropriate MOClassTable entry, as noted in col. 3 line 62 to col. 4 line 11.

Applicants state on page 9 that the instant application discloses that "instead of implementing a table or rule object as a redundant definition of the data structure (the Examiner assumes that Applicants believe this to be the case in Adusumilli), the length and location of each of the data structure's parameters are defined within the table or rule object by the sizeof() and offsetof() functions. Thus, the table or rule object is based on the definition of the data structure itself." The Examiner must admit that the wording of the argument presents some confusion, and is not entirely clear as to what the exact difference is between the prior art and the instant application. It would appear to the Examiner that Applicants are stating that rather than utilizing sizeof() and offsetof() functions to query data stored in a MOClassTable data structure, and then storing the length and location values

into another section of the table, the instant application utilizes sizeof() and offsetof() functions to query an existing predefined data structure which is not a table or rule object, and then storing the length and location values into a definition object such as a table or rule object.

Regardless, the claimed invention remains broad enough such that Adusumilli fully discloses the claimed invention, as there is no clear differentiation between data structures or table or rule objects. Table or rule objects are still data structures. Adusumilli utilizes sizeof() and offsetof() functions to define a length and location of parameters stored in a table data structure. Furthermore, assuming arguendo that the MOClassTable is not "a data structure" as required by the claim, the defined length and location values are values which correspond to parameters of data structures; even if the data structures do not exist yet and are to be generated in the future, the length and location values returned are still values "of a data structure." Adusumilli then stores those length and location parameters within an identifying object in a data structure definition (the MOClassTable).

As such, the Examiner respectfully submits that Adusumilli does indeed disclose the required limitations of independent claims 1, 10 and 14.

For these reasons, the rejection of claims 1, 10 and 14 is proper and maintained.

Regarding claims 2-9 and 11-13:

The applicant states that claims 2-9 and 11-13 are allowable as being dependent on an allowable base claim. Furthermore, the applicant fails to show that the reasons to combine and motivations concerning the rejections of claims 2-9 are improper. As has been shown above, the rejections of

independent claims 1, 10 and 14 are proper, and as such, the argument that claims 2-9 and 11-13 are allowable as being dependent on an allowable base claim is considered moot. Therefore, the rejections of claims 2-9 and 11-13 are proper and maintained.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trenton J. Roche whose telephone number is (571) 272-3733. The examiner can normally be reached on Monday - Friday, 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Trenton J Roche
Examiner
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TJR

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